

REMARKS

1. Claim Rejections – Double Patenting

The Examiner has provisionally rejected claims 1-11, 12-18, 19-23, and 24-34 on the grounds of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-11, 12-18, 19-23, and 24-34 of copending U.S. Patent Application No. 10/956,431 in view of Montijo (US 6,052,107).

In response, Applicants respectfully point out that the instant 09/746,854 application (the '854 application) was filed December 22, 2000, while the co-pending U.S. Patent Application No. 10/956,431 (the '431 application) was filed September 30, 2004. As such, it seems unlikely that the instant '854 application will improperly extend the patent term of an application filed over three and a half years later. However, should that situation come to fruition, Applicants will gladly submit a terminal disclaimer in compliance with 37 C.F.R. §1.321(c) to overcome the double patenting rejection.

2. Claim Objections

The Examiner has objected to claims 12-34 due to antecedent basis issues. In response, Applicants have amended independent claims 12, 19 and 24 to overcome the objection, and therefore, likewise for dependent claims 13-18, 20-23, and 25-34. Accordingly, Applicants submit that these claim objections have been overcome.

3. Claim Rejections – 35 U.S.C. § 112, second paragraph

The Examiner has rejected claims 1-34 under 35 USC §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter, which the Applicants regard as the invention. Applicants respectfully traverse the rejection.

However, in order expedite prosecution, independent claims 1, 12, 19, and 24 have been amended to clarify designation and nomenclature issues for the Examiner. Accordingly, the Applicants submit that the § 112 rejection to the dependent claims, which depend from independent claims 1, 12, 19, and 24, has also been overcome.

4. Claim Rejections – 35 U.S.C. § 103(a)

The Examiner has rejected claims 1-34 under 35 U.S.C. § 103(a) as being unpatentable over Swales *et al.* (US 6,233,626) and further in view of Montijo (US 6,052,107). Applicants respectfully traverse this rejection. For brevity, only the bases for the rejection of the independent claims are traversed in detail on the understanding that the dependent claims are also patentably distinct over the cited references as they depend directly from their respective independent claim. Nevertheless, the dependent claims include additional features that, in combination with those of their respective independent claim, provide further, separate, and independent bases for patentability.

The Examiner has stated that Swales *et al.* and Montijo teach or suggest each and every element of the claimed invention claims 1-34. However, the Swales *et al.* reference does not teach or suggest the claimed element, as amended, of “a general purpose device controller employing asynchronous true real time peripheral device control.” Notably, the control system utilized by the Swales *et al.* reference is synchronous (i.e., occurring at regular fixed time intervals), in contrast to the asynchronous (i.e., can occur at any time and at irregular time intervals) control system of the claimed invention. In the Swales *et al.* reference, “*the request message and the response message is limited to a length that is less than a TCP transaction length and/or a maximum transmission unit limit, or both....*” Otherwise stated, in the Swales *et al.* reference, synchronous fixed time intervals are utilized in an attempt to mimic some aspects of real time control, but do NOT provide asynchronous true real time peripheral device control.

Specifically, the Swales *et al.* reference uses the above referenced “synchronous fixed time intervals” language (or equivalent slightly paraphrased language) eleven (11) separate times throughout the application. The “synchronous fixed time intervals” language is used two (2) times in the Abstract section, three (3) times in the Claims section (in every independent claim), three (3) times in the Summary section, and three (3) times in the Detailed Description section. This critical language explains that the TCP transaction length and/or the maximum transmission unit limit length are a synchronous fixed time interval, and that any request message and/or response message must be able to fit within that synchronous fixed time interval in order for the invention to function properly.

As stated above, in the Swales *et al.* reference, synchronous fixed time intervals are utilized in an attempt to mimic some aspects of real time control, but do NOT provide asynchronous true real time peripheral device control. The Examiner has pointed out that the communication adapter of the Swales *et al.* reference may be used to replace real time field bus components in some specific situations. However, the Swales *et al.* reference never states that the communication adapter provides real time control, only that it has the ability to provide a “make-shift” substitute for field bus components in some specific situations using synchronous fixed time intervals. Accordingly, the communication adapter of the Swales *et al.* reference clearly does not provide true real time peripheral device control, let alone asynchronous true real time peripheral device control.

The Montijo reference does nothing to supply the missing elements of the Swales *et al.* reference. Indeed, the Montijo reference merely discloses a non-true real time computer having a non-true real time operating system and a non-true real time-enabled circuit board, this teaching is meaningless unless taught in combination with “a general purpose device controller employing asynchronous true real time peripheral device control.”

Thus, the Swales *et al.* reference and the Montijo reference, either alone or in combination, do not teach or suggest “a general purpose device controller employing asynchronous true real time peripheral device control” as recited in the claimed invention. Accordingly, Applicants respectfully submit that the 35 U.S.C. § 102(e) rejection of claims 1-34 as unpatentable over Swales *et al.* has been overcome.

CONCLUSION

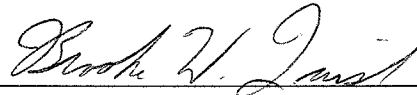
Applicants have made an earnest and *bona fide* effort to clarify the issues before the Examiner and to place this case in condition for allowance. Reconsideration and allowance of all of claims 1-34 is believed to be in order, and a timely Notice of Allowance to this effect is respectfully requested.

The Commissioner is hereby authorized to charge the fees indicated in the Fee Transmittal, any additional fee(s) or underpayment of fee(s) under 37 CFR 1.16 and 1.17, or to credit any overpayments, to Deposit Account No. 194293, Deposit Account Name STEPTOE & JOHNSON LLP.

Should the Examiner have any questions concerning the foregoing, the Examiner is invited to telephone the undersigned attorney at (310) 734-3244. The undersigned attorney can normally be reached Monday through Friday from about 9:00 AM to 6:00 PM Pacific Time.

Respectfully submitted,

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